

Appl. No. : 09/553,586
Filed : April 20, 2000

General Objections

By the Office Action, the Examiner objected to the drawings as failing to comply with 37 C.F.R. § 1.84(p)(5) because they include reference signs 108, 211 and 716 not mentioned in the description. Applicants have amended the specification to include reference numbers 211 (page 25) and 716 (page 40). Applicants note that the specification at page 9, line 17 describes and refers to element 108.

The Examiner indicated that Figures 1 and/or 2 should be designated as "prior art." Applicants have requested approval of an amendment to Figures 1 and 2 as suggested by way of a separate Request for Approval of Drawing Changes submitted herewith. Applicants have also amended the brief description of Figures 1 and 2 appearing at page 15 to indicate that these figures illustrate the prior art.

The Examiner objected to the drawings as failing to include reference sign 444 referred to on page 20. Applicants have requested approval of an amended Figure 4 including reference sign 444 by way of the Request for Approval of Drawing Changes submitted herewith.

The Examiner noted the need to correct reference number "408" to "410", 430" to "432" and "512" to "506" in several instances of their occurrences. By this response, Applicants have requested those corrections.

The Examiner also objected to the disclosure due to a number of informalities. Applicants have requested the correction of the informalities noted by the Examiner, as well as a few others identified by the Applicants. Applicants have also amended the Abstract, as its length as filed exceeded 150 words. Applicants assert that these changes add no new matter.

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Claim Rejections

Section 112

By the Office Action, the Examiner rejected claims 6 and 7 under 35 U.S.C. § 112(2) as being indefinite, asserting that it is unclear how claim 6 relates to claim 1, and asserting that claim 7 is vague and indefinite. Applicants have canceled claims 6 and 7, obviating this rejection.

The Examiner indicated that there is insufficient antecedent basis for “said label” in line 6 of claim 10. Applicants have canceled claim 10, obviating this rejection.

Section 102/103

The Examiner rejected claims 1-20 under 35 U.S.C. § 102(e) as being clearly anticipated by U.S. Patent No. 6,249,291 to Popp et al. The Examiner further rejected claims 13 and 19 under 35 U.S.C. § 103(a) as being unpatentable over Popp et al.

Popp discloses a method in which a web page can be generated dynamically using input received in a return page. Abstract; Col. 4, lines 5-7. Popp discloses the ability to accomplish such by associating classes of objects with elements that define a web page. Id. The object classes are defined to manipulate and generate HTML elements in an HTML document. Col. 12, lines 2-5.

Popp recognizes that not all web browsers recognize all possible HTML extensions. As such, in Popp, HTML extensions are filtered out before a web page is sent to a client browser. Col. 19, lines 44-48. As such, Popp’s solution is to use a “group extension.” Col. 19, lines 55-56. These group extensions provide a link between an object that implements an HTML element and an object

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that implements a data item stored in a data source external to the WWW application. Col. 19, lines 56-61. In this configuration, a “name” property specifies the name of a group. Col. 16, lines 34-35.

Applicants point out that in Popp, the “name” is a group reference. Referring, for example, to Table 4 in Col. 16 of Popp, a marker (such as NSWTAG) is used to identify the bounds of a group in HTML. The “name” is used as a value or property which defines the group. In this configuration, neither the marker nor the name comprises a designation which is unique to a particular component of a GUI. To the contrary, the name is used to link an entire group to an association. Col. 16, lines 46-47.

Contrary to Popp, and as defined in the claims, a definitional statement for a particular component of a GUI includes at least one attribute including a unique name space designation. In other words, a unique name space designation is generated which is associated with a particular component of a GUI. As detailed in the application, this configuration has the advantage that the unique name space designation is associated with a particular GUI component for use in generating the GUI component or element on the client side, and at the same time, the unique name space designation can be used to identify the control which generated it. Thus, when values are associated with a GUI component on the client side, those values can be directed to the appropriate controls for processing of the data. This configuration is not detailed nor is it possible in Popp, since among other things Popp does not disclose use of unique name space designations with GUI components.

Independent claims 21 and 28 are believed to be allowable because they define a method and system, respectively, where components of a GUI are modeled by controls implemented by program code, and program code configured to generate an attribute of the GUI component in the form of a

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unique name space designation. As further defined in these claims, the unique name space is associated with a particular control and capable of identifying that particular control. As indicated above, such a configuration is not taught or suggested in Popp et al.

Independent claim 14 has similarly been amended to define a computer program product having the limitations just described.

Claims 15-20, 22-27 and 29-33 are believed to be allowable for at least the reason that they depend from an allowable independent claim. These claims are also believed to independently define patentable subject-matter. For example, with respect to claims 20 and 27, Applicants assert that the prior art does not teach or suggest the arrangement as claimed where embedded GUI elements are defined at one level by a first unique name space designation and at a second embedded level by a second unique name space designation which includes the first unique name space designation.

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Summary

Applicants assert that claims 14-33 are in a condition for allowance and respectfully request a notice as to the same.

Respectfully submitted,

Dated: January 22, 2003 By: 
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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : G. Lee et al.)
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Appl. No. : 09/553,586)
)
Filed : April 20, 2000)
)
For : **METHOD AND APPARATUS FOR**)
 USING NAME SPACES IN A)
 GRAPHICAL USER INTERFACE)
)
Examiner : S. Becker)
)

I hereby certify that this correspondence and all marked attachments are being deposited with the United States Postal Service as first-class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on

January 22, 2003

(Date)

R. Scott Weide, Reg. No. 37,755

ADDENDUM TO RESPONSE TO OFFICE ACTION

Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

RECEIVED
JAN 31 2003
Technology Center 2100

This is an Addendum to the Response to Office Action showing the changes made to the specification/claims made thereby.

IN THE SPECIFICATION:

Please replace the paragraph appearing at page 2, lines 10-21 with:

Computers and computer networks are used to exchange information in many fields such as media, commerce, and telecommunications, for example. Media information may include movies, video, audio CD's, radio, newspapers, books, magazines, and computer games. Commerce information includes electronic banking and bill payment, as well as electronic purchases. Voice telephone transmissions and video conferencing are examples of telecommunication information. The exchange of information between computers typically occurs between a "server application" that provides information or services, and a "client application" that receives the provided

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information and services. A client application executes on a client computer or client. A server application is executed on a server computer or server.

Please replace the paragraph appearing at page 12, lines 10-25 with:

In an embodiment of the invention, a control mechanism or control [.] is implemented as an object-oriented object. The object-oriented object can be defined using the Java programming language, for example. In an embodiment of the invention, the object is a Java bean. In a design environment, the beans' appearance and behavior can be customized by a GUI or application developer. In an embodiment of the invention, a design tool is used to design a page, screen or other display. When a page design is finalized, a page object class definition is compiled and a class file is generated. Other controls defined for the page are serialized and uploaded to the server, along with any HTML that is specified at design time, to the server. A page designer can therefore generate a page control, serialized controls, and HTML in an embodiment of the invention. In one or more embodiments of the invention, the designer is executed on a client computer and the page designer (e.g., a page control, serialized controls and/or HTML) are uploaded to a server computer.

Please replace the text appearing at page 15, lines 2-3 with:

Figure 1 provides an example of a transfer of data between a client and server using name-value pairs (prior art).

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Please replace the text appearing at page 15, lines 4-5 with:

Figure 2 illustrates the compile and runtime environments for a processing system (prior art).

Please replace the paragraph appearing at page 16, lines 9-20 with:

In an embodiment of the invention, components of a page are modeled as control mechanisms. According to an embodiment of the invention, a control mechanism is implemented as program code such as an object-oriented object. The control mechanism is capable of generating some or all of [the] a GUI definition (e.g., HTML statements that define[s] a Web page). A page design environment can contain representations of control mechanisms that can be included in a page definition. For example, a palette can contain control mechanisms that may be dragged into a graphical representation of a page in the page design environment. A graphical representation of the GUI element associated with the control mechanism is displayed in the page, for example. The properties and behavior of the control mechanism may be modified in the page design environment.

Please replace the paragraph appearing at page 19, lines 3-12 with:

Figures 4A-4B illustrate a use of name spaces according to an embodiment of the invention. Referring to Figure 4A, name spaces 406, 410 [408] and 430 are created on server 402 for controls 408A, 408B and 432. Controls 408A and 408B are, in this example, instances of the same object-oriented "Text" control object class. However, controls 408A and 408B can be instantiated from different object classes. Control 432 [430] is an instance of an input control object class. Controls

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408A, 408B and 432 [430] are capable of generating definitional statements that can be used to construct GUI elements 416, 418 and 440 for display in a display area of, for example, browser 422.

Please replace the paragraph appearing at page 20, line 20 to page 21, line 2 with:

The name portion of the name-value pairs 426, 428 and 446 includes the label generated by controls 408A, 408B and 432, [430] which includes the name space designations (e.g., “nS1”, “nS2” and “nS3”). Name-value pairs 426, 428 and 446 are transmitted to server 402. The labels in the name-value pairs 426, 428 and 446 can be used to direct name-value pairs 426, 428 and 446 to the appropriate controls (e.g., controls 408A, 408B and 432 [430], respectively) for processing the data.

Please replace the paragraph appearing at page 21, lines 3-5 with:

As is discussed below, name-value pairs 426, 428 and 446 may be transmitted as events to controls 406, 410 and 432 [430], respectively, in one or more embodiments of the invention.

Please replace the paragraph appearing at page 21, lines 6-8 with:

To provide a better understanding of using name spaces in a graphical user interface, an overview of object-oriented programming, the Java programming language and program execution are provided below.

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Please replace the paragraph appearing at page 25, lines 6-14 with:

The classes of a Java applet are loaded on demand from the network (stored on a server), or from a local file system, when first referenced during the Java applet's execution. The virtual machine locates and loads each class file, parses the class file format, allocates memory for the class's various components, and links the class with other already loaded classes. This process makes the code in the class readily executable by the virtual machine. Native code, e.g., in the form of a dynamic linked library (DLL) 211 is loaded when a Java programming language class file containing the associated native method is instantiated within the virtual machine.

Please replace the paragraph appearing at page 33, lines 3-10 with:

In one embodiment of the invention, page control 450 may send the data to a control in the form of an event. Data change events 434, 436 and 438 are sent to controls 408A, 408B and 432 [430], for example. As is discussed below, a portion of control 432's [430's] response may be to notify page control 450 (e.g., notification 454) that control 432 [430] controls the GUI element used to submit the page. Page control 450 retains this information, and sends button-click event 452 to control 432 [430] after all of the data has been processed via the data change events.

Please replace the paragraph appearing at page 36, lines 17-21 with:

Figure 5A illustrates an example of a component structure of a design of a page according to an embodiment of the invention. Page 502 includes container 504 and subpage 506 [512].

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Container 504 contains header 508 and body 510 elements. Subpage 506 includes container 512 header 514 and body 516.

Please replace the paragraph appearing at page 36, line 22 to page 37, line 4 with:

At runtime, controls are instantiated for the components of the page as illustrated in Figure 5B. Page control 522 corresponds to page 502. Container control 524 and subpage control 526 correspond to container 504 and subpage 506 [512], respectively. Header controls 528 and 534 correspond to header 508 and 514, respectively. Body controls 530 and 536 correspond to body 510 and 516, respectively.

Please replace the paragraph appearing at page 38, lines 3-10 with:

Subpage control 52 corresponds to subpage control 506, the second element in page 502. Its name space designation includes page control 522's name space designation (i.e., "s1"), followed by "_" followed by "2" (i.e., "s1_2"). As the first element in subpage 506 [512], container 512's control (i.e. container control 532) is given subpage control 526's name space designation (i.e., "s1_2"), followed by "_" followed by "1". Header control 534 and body control 536 have name space designations of "s1_2_1_1" and "s1_2_1_2", respectively.

Please replace the paragraph appearing at page 39, line 23 to page 40, line 6 with:

Figure 7 provides an example of a "name-value pair" submission process according to an embodiment of the invention. At step 702, a determination is made whether all of the submitted

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name-value pairs have been processed. If so, processing continues at step 714 to invoke any “submit” processing (e.g., invoke a submit method of a submit control). As discussed, a control can indicate that it is to be called to perform processing once all of the data has been posted, for example. Such a control can be called at a step 714 and then end 716.

Please replace the paragraph appearing at page 41, lines 7-15 with:

In an embodiment of the invention, a position-based name space designation assignment is used to dynamically assign name space designations. A control’s position is determined, for example, by its position in a page design relative to the top left-hand corner of the page layout. The page control typically is given the first name space designation for the page (e.g., “S1”). The first control encountered receives a name space design (e.g., “1”) prefixed by the page’s name space designation (e.g., “s1”). Reading from left to right and top to bottom, the next controls that are encountered in the page are given the name space designation of “2” and ”3”, etc.

Please replace the Abstract appearing at page 52, lines 2-22 with:

Embodiments of the invention provide a mechanism for using name spaces in graphical user interface (GUI) page definitions. A name space designation is assigned to each control mechanism that generates definitional statements for the GUI. In one embodiment, a page control is assigned a name space designation and assigns a name space designation for each of the controls that are used to generate the page. The name space designation can be used to uniquely identify a control. The

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name attributes including the name space designation may be sent to a client's browser where it may be incorporated by the browser into a name-value pair when transferring data back to the control.

IN THE CLAIMS

14. A computer program product comprising:

a computer usable medium having computer readable program code embodied therein for using a name space in generating a graphical user interface (GUI) comprising:

computer readable program code configured to cause a computer to generate a unique name space designation computer readable program code;

computer readable program code configured to cause a computer to associate said unique name space designation with a control implemented with said control program code;

said computer readable control program code configured to cause a computer to use said unique name space designation to generate a [said] plurality of definitional statements for said GUI and identify said control with which said unique name space designation is associated.

15. The computer program product of claim 14 wherein said computer readable configured program code further comprises:

computer readable program code configured to cause a computer to generate a label to be associated with data, said label including said unique name space designation.

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16. The computer program product of claim 15 further comprising:

computer readable program code configured to cause a computer to associate said label with
said data;

computer readable program code configured to cause a computer to identify said computer
readable control program code as recipient of said data using said unique name space designation
in said label.

20. The computer program product of claim 14 wherein said GUI comprises a plurality of
GUI elements, one of said plurality of GUI elements is defined as being within another of said
plurality of GUI elements, said computer readable program code configured to cause a computer to
associate further comprises:

computer readable program code configured to cause a computer to associate a first unique
name space designation with a first computer readable control program code configured to generate
definitional statement for said another of said GUI element;

computer readable program code configured to cause a computer to associate a second unique
name space designation with a second computer readable control program code configured to
generate definitional statements for said one of said plurality of GUI elements, said second unique
name space designation including said first unique name space designation.